Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission's Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band	)	IB Docket No. 99-67

COMMENTS OF STRATOS MOBILE NETWORKS, INC. AND STRATOS COMMUNICATIONS, INC.

Stratos Mobile Networks Inc. and Stratos Communications, Inc. (collectively "Stratos") hereby file these comments in response to the Commission's Further Notice of Proposed Rulemaking ("*FNPRM*") in the above-captioned proceeding.[1] The *FNPRM* seeks comment on a variety of proposed rules aimed at requiring Mobile Satellite Service ("MSS") licensees providing real-time, two-way switched voice service that is interconnected with the public switched network to provide 911 and/or enhanced 911 ("E911") services.[2]

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[1] *See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Further Notice of Proposed Rulemaking, FCC 02-326 (rel. Dec. 20, 2002). Stratos Mobile Networks Inc. and Stratos Communications, Inc. are indirectly owned by Stratos Global Corporation, a Canadian corporation.

[2] *See FNPRM* at ¶¶ 17, 28.

Stratos is one of the largest distributors of MSS offered over the Inmarsat, Motient and Iridium satellite systems, providing a unique perspective from which to comment on the critical role that MSS plays in providing day-to-day communications for business and government. Indeed, the significant growth in MSS has allowed Stratos to become one of the fastest growing satellite companies in the world and one of the leading MSS service providers in the U.S.

I. MSS PROVIDERS, LIKE STRATOS, DO NOT MEET THE COMMISSION'S GENERAL CRITERIA FOR SUBJECTION TO THE PROPOSED BASIC 911 AND E911 REQUIREMENTS

The Commission seeks comment on the criteria that should be used in analyzing whether a particular class of providers (*e.g.*, MSS, resold cellular and PCS, AMTS) should be required to comply with its basic and E911 service requirements. The Commission proposes analyzing each service or product based on whether:

> (1) it offers real-time, two way voice service that is interconnected to the public switched network on either a stand-alone basis or packaged with other telecommunications services;
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> (2) the customers using the service or device have a reasonable expectation of access to 911 and E911 services;
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> (3) the service competes with traditional CMRS or wireline local exchange services; and
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> (4) it is technically and operationally feasible for the service or device to support E911.[3]

Stratos does not believe that MSS meets the general criteria set forth above.

[3] *Id.* at ¶ 13.

A. MSS Customers Do Not Have a Reasonable Expectation of Access to 911 and E911 Services

First, contrary to the Commission's preliminary conclusion, Stratos does not believe that its MSS customers have a reasonable expectation of access to 911 and E911 services. Neither Inmarsat, which has been providing communication services for over 20 years, nor Iridium, has ever provided 911 service. Indeed, the Inmarsat system was originally created by international treaty in large part to provide the Global Maritime Distress and Safety System ("GMDSS") -- not 911 service -- in emergency situations.

Consumers are also unlikely to expect to be able to access 911 and E911 services due to the size and operation of many MSS terminals. Inmarsat terminals, like the Inmarsat M4 and Inmarsat Mini-M, are similar in size and functionality to a laptop computer, and require the user to physically set up the terminal (which can take several minutes) and lock onto the satellite. Most other Inmarsat terminals offered by Stratos take even more time to configure and operate.[4] Given the substantial amount of time needed to set up these terminals and to establish the requisite satellite link, MSS is not likely to be the service chosen in an emergency situation.

B. MSS Does Not Compete with Traditional CMRS or Wireline Local Exchange Services

Second, MSS does not compete with traditional CMRS or wireline local exchange services. Stratos primarily provides services to industrial users in remote global locations where traditional CMRS and wireline local exchange services are not available. Stratos also offers an array of video, data, and voice services that far exceed in scope the services offered by traditional

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[4] Other transportable terminals offered by Stratos, like the Inmarsat A and Inmarsat B terminals, are the size of a small suitcase and weigh between 15-20 kilograms (33-44 lbs.) Maritime terminals, like the Inmarsat A and Inmarsat B maritime terminals installed on maritime vessels, have radomes measuring 1.0-1.2 meters in height and weighing 60-70 kilograms (132-150 lbs.) Indeed, as noted earlier, most maritime-based MSS users will opt to use GMDSS in an emergency situation.

CMRS and wireline local exchange services. In addition, Stratos' customers pay rates that are significantly more than the costs for most traditional CMRS and wireline services. The substantial cost and time involved in placing an MSS call make it far more likely that MSS users will opt to dial 911 on their traditional CMRS or landline phone, if available, as a matter of first resort in emergency circumstances.

C. It is Not Technically and Operational Feasible for Stratos to Support E911

Third, it is not technically and operationally feasible for Stratos to support E911, including the provision of Automatic Location Information ("ALI") with any useful level of accuracy. As a reseller of MSS service, Stratos must rely upon the capabilities of the satellite networks it uses (*i.e.*, Inmarsat, Motient, Iridium). As has been already noted to the Commission by each of those entities in earlier proceedings, none is currently able to provide ALI with any meaningful level of accuracy for emergency purposes. In fact, for some Inmarsat calls, Stratos would be unable to tell whether a customer's MSS call was placed from somewhere in Europe or North America.

While the provision of Automatic Numbering Information ("ANI") is technically possible for Stratos in its capacity as a gateway operator for customers using the Inmarsat network, creating an ANI-capable service would be a technical nightmare and would come with substantial costs. Stratos does not currently provide ANI and it would be extremely difficult, both technically and economically, for Stratos to offer ANI in the future.

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In short, the MSS industry does not meet three of the Commission's four-pronged criteria for having to comply with the proposed basic and E911 service requirements. First, MSS users do not expect to be able to access 911 or E911 services using MSS terminals. Second, MSS does not compete with traditional CMRS or wireline local exchange services. Third, it is

not technically or operationally feasible for the current MSS infrastructure to support the majority of E911 services. As a result, MSS should be excluded from the proposed 911 and E911 requirements.

II. THE COSTS OF REQUIRING MSS LICENSEES TO PROVIDE BASIC 911 OR E911 SERVICES TO SUBSCRIBERS FAR OUTWEIGH THE BENEFITS

In deciding whether to require any MSS licensees to provide basic 911 and/or E911 services to customers, it is imperative that the Commission perform a comprehensive analysis of the costs and benefits of any such requirements. Even if it were technically and operationally feasible to provide 911 services to customers, the costs of requiring MSS licensees to provide basic 911 or E911 services far outweigh the benefits of providing these emergency services. Stratos' operations center in Newfoundland, Canada, which handles the few emergency calls placed over the Iridium and Inmarsat networks (because neither entity currently offers emergency 911 services), has averaged only one emergency call annually over the last five years.[5] Similarly, it is Stratos' understanding that Motient, which handles its own emergency 911 calls, also handles a very small number of such calls annually.

There are several reasons for the dearth of 911 calls over MSS systems. First, there are far fewer users of MSS services than there are of traditional CMRS services. According to the *FNPRM,* Inmarsat, a leading global MSS service provider, has approximately 250,000 terminals in use *worldwide.*[6] By way of comparison, the Commission's most recent

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[5] Stratos customers using the Inmarsat, Motient and Iridium networks access the Stratos operations center by dialing "#11" on their MSS terminals. The "#11" feature and GMDSS essentially provide the same basic 911 services that the Commission is proposing at a substantially reduced cost.

[6] *See FNRPM* at ¶ 23.

CMRS Annual Report cites mobile telephony subscribership at 128.5 million *nationwide*.[7] Second, many users of MSS services are located offshore and prefer to rely upon the internationally-accepted GMDSS for accessing emergency services. In fact, the Commission's rules already require all large passenger and cargo ships to be staffed with personnel and equipment capable of transmitting ship-to-shore distress alerts using GMDSS.[8] Requiring MSS licensees to provide a duplicative emergency service is unnecessary and could lead to caller confusion. Finally, as noted earlier, contrary to the Commission's stated belief, MSS customers do not expect to be able to dial 911 in order to obtain emergency services.[9] It is much more likely that, in an emergency situation, a person would opt to use GMDSS or a traditional CMRS or wireline phone, if available, to access emergency services.

III. IF THE COMMISSION ADOPTS MSS 911 REQUIREMENTS, LICENSEES PRIMARILY PROVIDING MARITIME, AERONAUTICAL OR NON-VOICE SERVICES SHOULD BE EXCLUDED FROM ANY 911 REQUIREMENTS

Stratos concurs with the Commission that if the Commission adopts MSS 911 requirements, consistent with the Commission's approach to terrestrial wireless services, MSS licensees primarily providing maritime, aeronautical or non-voice MSS services should be excluded from any 911 requirements.[10] As acknowledged by the Commission, ships primarily rely upon GMDSS for emergency and distress situations, while airplanes use other

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[7] *See Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Seventh Report, 17 FCC Rcd. 12985, 12989 (2002).

[8] *See generally* 47 C.F.R. Part 80, Subpart W.

[9] *See FNPRM* at ¶ 28.

[10] *Id.* at ¶ 47.

radiocommunication channels for emergency assistance.[11] The substantial majority of Stratos' U.S.-based customers either place and/or receive MSS transmissions while at sea or while airborne and approximately 38% of the MSS transmissions made by Stratos' U.S.-based customers involve a non-voice communication. As a prominent provider of maritime, aeronautical and non-voice MSS wireless services, the well-intentioned speculative benefits of the proposed 911 requirements to MSS users clearly do not outweigh the technical, operational and economic burdens that these requirements would impose upon Stratos and its customers.

IV. IF THE COMMISSION ADOPTS MSS 911 REQUIREMENTS, ONLY MSS GATEWAY OPERATORS PROVIDING VOICE SERVICES SHOULD BE SUBJECT TO THE REQUIREMENTS

In the *FNRPM*, the Commission never specifies the type of "MSS licensees" or "MSS operators" that would be subject to the proposed 911 and/or E911 service requirements. If the Commission adopts any emergency service requirements for MSS licensees, only FCC-licensed MSS gateway operators (*i.e.*, entities operating earth stations transmitting to and receiving from the satellites and connecting with other communications systems such as the Public Switched Telephone Network) providing voice services should be subject to the new requirements. Due to the technical architecture of an MSS system, if technically feasible, only gateway operators (as opposed to MSS space station operators or non-facilities-based MSS resellers) would be able to ensure the proper routing of an emergency call and gather other helpful information (*e.g.*, ALI, ANI) to assist in an emergency situation.[12] This is because the gateway operator is the central point, with access to the PSTN, through which all MSS calls must

[11] *Id.* at ¶ 45.

[12] Stratos is only a gateway operator in its provision of services using the Inmarsat network. While Stratos handles a minority of the calls placed over the Motient network, Stratos is purely a reseller in its provision of services using the Iridium networks. In its capacity as a reseller, any data transmitted over the Motient or Iridium networks is inaccessible to Stratos.

be routed, whether the call recipient is an MSS, traditional CMRS or wireline user. In addition, the gateway operator controls all of the MSS caller's call-identifying information -- information which is used to ensure that the call is properly routed and billed.

V. SHOULD ANY PROPOSED 911 REQUIREMENTS BE ADOPTED, THE REQUIREMENTS SHOULD ONLY BE APPLIED PROSPECTIVELY

Should the Commission ultimately require MSS licensees to meet any of the proposed E911 requirements, these E911 obligations should only apply to future MSS networks and terminals. The costs associated with upgrading current satellite networks and retrofitting handsets to accommodate the proposed enhanced emergency service capabilities (*e.g.*, ANI, ALI) would be exorbitant and would ultimately be borne by the users. It is not in the public interest to force U.S. consumers to take on these additional costs having already purchased and deployed their terminals.

VI. MANDATORY INCORPORATION OF GPS INTO MSS TERMINALS WILL PROVE TO BE COSTLY FOR CONSUMERS

While Stratos agrees with the Commission that mandatory incorporation of GPS into MSS transceiver units would be the only current conceivable means of providing ALI, GPS also has its drawbacks. GPS-equipped MSS units are not currently able to transmit and receive at the same time due to interference issues. In addition, as the Commission acknowledges, incorporation of GPS technology into MSS terminals will significantly alter the weight, size and power consumption of the terminals and increase their cost.[13] Moreover, as noted earlier, it is not in the public interest to force consumers take bear the significant additional costs that will come with equipping MSS terminals with GPS.

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[13] *FNRPM* at ¶ 41. As discussed *supra*, any 911 requirements applicable to MSS licensees should only be applied prospectively.

VII. CONCLUSION

MSS is a critical service that serves an indispensable role in the communications network for public and private entities. While the Commission's proposed emergency service requirements are well-intentioned, the proposed rules would impose significant costs and create technical difficulties, while yielding little benefit to the relatively small number of MSS subscribers. If, however, the Commission requires MSS licensees to provide basic and/or E911 services, the Commission's 911 requirements should only be applicable to FCC-licensed MSS gateway operators providing voice services and they should only be applied to new MSS networks and terminals.

Respectfully submitted,

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